

## GLOSSARY

### Section I. ABBREVIATIONS

ABMA . . . .	American Boiler Manufacturers Association	gph . . . . .	Gallons per hour
AGA . . . . .	American Gas Association	H <sub>2</sub> . . . . .	Hydrogen
ARI . . . . .	Air Conditioning and Refrigeration Institute	HRT . . . . .	Horizontal return tubular
ASHRAE . .	American Society of Heating, Refrigeration and Air Conditioning Engineers	HTHW . . . .	High temperature hot water
ASME . . . .	American Society of Mechanical Engineers	HW . . . . .	Hot water
AVD . . . . .	Automatic Vent Damper	IPS . . . . .	Iron pipe size
BTU . . . . .	British thermal unit	LPG . . . . .	Liquified petroleum gas
BTUH . . . .	British thermal units per hour	mu . . . . .	One thousandth of an inch
CO . . . . .	Carbon Monoxide	NFPA . . . . .	National Fire Protection Association
CO <sub>2</sub> . . . . .	Carbon Dioxide		
EDR . . . . .	Equivalent direct radiation	O <sub>2</sub> . . . . .	Oxygen
EMCS . . . .	Energy Monitoring and Control System	ppm . . . . .	Parts per million
F . . . . .	Degrees Fahrenheit	psi . . . . .	Pounds per square inch
F&T . . . . .	Float and thermostat	psia . . . . .	Pounds per square inch, absolute
FIA . . . . .	Factory Insurance Association	psig . . . . .	Pounds per square inch, gauge
FM . . . . .	Factory Mutual	PRV . . . . .	Pressure reducing valve
fpm . . . . .	Feet per minute (measure of velocity)	PVC . . . . .	Polyvinyl chloride
		RF . . . . .	Radio frequency
		SMACNA . .	Sheet Metal and Air Conditioning Contractors' National Association
		UL . . . . .	Underwriters Laboratories, Inc.

### Section II. TERMS

Alkali—A substance with a characteristically acid taste and having the ability to neutralize acids. May be caustic.	Bimetallic element—A device consisting of two different metals fastened together which bends in a certain direction depending on the temperature. Commonly used in thermostats.
Amine-free steam—Steam with no trace of ammonia.	Clinker—The incombustible residue, fused into an irregular lump that remains after the combustion of coal.
Anthracite Buckwheat coal—A hard natural coal, containing little volatile matter, commonly used in mechanical types of firing equipment.	Combustion—Burning, or a chemical change which produces heat and light.
Aquastat—A device which regulates the water temperature in a boiler.	Corrosion—The process of rusting, or wearing away, of metals.
Atmospheric pressure—The average pressure on the surface of the earth at sea level, or 14.7 psia.	Distillate fuel oil—A light, volatile substance, such as No. 2 oil, produced by fractional distillation of petroleum.
Atomization—Transforming to a fine spray.	Draft hood—A device, usually integral to a furnace, which maintains furnace draft by admitting room air into the vent.
Automatic vent damper—A thermally or electrically actuated damper, located on a furnace or boiler vent, which closes when the heating equipment is between firing cycles.	Eductor—A device to draw air out.
Barometric draft control—A damper, mounted on the vent stack of a furnace or boiler, which maintains the draft at a constant level.	Efficiency—The ratio of effective or useful output to total input in any system.

- Fractional distillation—A heat dependent process used to separate a substance into pure fractions.
- Fully condensing furnace—A furnace designed with sufficient heat transfer surface to condense moisture from the flue products, thereby increasing furnace efficiency.
- Gauge glass—A device used on a steam boiler that provides a visual indication of boiler water level.
- Gravity heating system—A system in which the heating medium circulates naturally because of the temperature difference between the supply and return medium.
- Hartford Loop—A boiler piping configuration which eliminates unsafe lowering of boiler water level due to back up of boiler water into the return line.
- Humidifier—A device that adds moisture to a space to maintain a certain relative humidity.
- Infrared heater—A system consisting of a hot surface that heats surrounding objects through infrared radiation.
- Infrared photometer—A meter measuring strength of infrared radiation, electromagnetic radiation with wavelengths greater than that of visible light and shorter than microwaves.
- Latent heat—Heat needed to change the phase of a substance, such as water changing to steam.
- Limit control—A device which will shut down a boiler or furnace if a parameter, such as steam pressure or supply air temperature, exceeds a predetermined level.
- Millivoltmeter—A device which measures voltage at the scale of millivolts, or thousandths of a volt.
- Motive pressure—Line velocity pressure in steam piping.
- Non-ferrous—Not containing any iron.
- Pilotstat—A device which senses the presence of a pilot flame and allows the main gas burner to ignite.
- Pneumatic system—A compressed air system, used commonly for controls.
- Polarity—An alignment of orientation of two objects to opposite extremes.
- Primary controls—Sensors and actuating devices that directly operate the heating system in accordance with demands of the space thermostat.
- Pyrometer—An electrical thermometer for measuring high temperatures.
- Retort—The central trough into which coal is fed in certain types of boilers.
- Residual fuel oil—Heavy, thick substance, such as No. 6 oil, left over from the distillation of petroleum.
- Run-of-mine coal—Commonly used for domestic heating and steam production, this coal is shipped as it comes from the mine without screening.
- Scale—A flaky oxide film formed on a metal such as iron when heated to high temperatures.
- Steam trap—A device designed to pass only condensate and air from a steam system, while trapping steam.
- Stethoscope—An instrument used to listen to sounds inside of a pipe.
- Stoker—A mechanical device which feeds coal to a furnace.
- Thermocouple—A device which measures temperature by means of thermoelectric energy.
- Tuyere—The opening through which air is forced into a blast furnace to facilitate combustion.
- Unit heater—A heating device, usually located directly in the space to be heated, consisting of a fan and a heat source.
- Vapor pressure—The pressure exerted by a vapor in equilibrium with its solid or liquid phase.
- Vaporization—The process of a solid or liquid becoming a gas.
- Viscosity—The degree to which a fluid resists flow under an applied force.